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DEPARTMENT OF THE ARMY

OFFICE OF THE ADJUTANT GENERAL

WASHINGTON, D.C. 20310

AGDA (M) (31 Oct 69) FOR 6T-UT-69B042

5 December 1969

SUBJECT: 50602

Senior Officer Debriefing Report: Engineer, USARV and CG, Engineer Troops Vietnam, Period 21 July 1968 to 14 October 1969 (U) (S)

SEE DISTRIBUTION

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14 Oct 69

- 1. Reference: AR 1-26, subject, Senior Officer Debriefing Program (U) dated 4 November 1966.
- 2. Transmitted herewith is the report of MG David S. Parker, subject as above.
- This report is provided to insure appropriate benefits are realized from the experiences of the author. The report should be reviewed in accordance with paragraphs 3 and 5, AR 1-26; however, it should not be interpreted as the official view of the Department of the Army, or of any agency of the Department of the Army.
- 4. Information of actions initiated under provisions of AR 1-26, as a result of subject report should be provided ACSFOR OT UT within 90 days of receipt of covering letter.

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KENNETH G. WICKHAM Major General, USA The Adjutant General

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# DEPARTMENT OF THE ARMY HEADQUARTERS, UNITED STATES ARMY VIETNAM APO SAN FRANCISCO 96375

24 OCT 1969

AVHGC-DST

SUBJECT: Senior Officer Debriefing Report

Assistant Chief of Staff for Force Development Department of the Army Washington, D. C. 20310

- 1. Attached are three copies of the Senior Officer Debriefing Report submitted by MG David S. Parker. The report covers the period 21 July 1968 to 14 October 1969 during which time MG Parker served as Engineer, USARV, and Commanding General, Engineer Troops Vietnam (Provisional).
- 2. MG Parker is recommended as a candidate guest speaker at appropriate joint colleges and service schools.

FOR THE COMMANDER:

1 Inel as (trip) 2 cy wd HQ, DA C. D. WILSON
1LT, ACT
Assistant Adjutant General

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# DEBRIEFING REPORT (RCS-CSFOR-74)

COUNTRY: Vietnam

DEBRIEF REPORT BY: Major General David S. Parker

DUTY ASSIGNMENT: Engineer, USARV, and Commanding General, Engineer

Troops Vietnam (Provisional)

INCLUSIVE DATES: 21 July 1968 - 14 October 1969

DATE OF REPORT: 14 October 1969

- 1. The main body of this report deals with my views on the broader aspects of the counterinsurgency effort in Vietnam from an Army engineer point of view. At inclosure 1 are additional details of engineer activities and problems which are of less general interest or which are not necessarily related or limited to a counterinsurgency environment.
- 2. The Army engineer force structure was designed and sized for the most part to provide support to US forces consisting of engineer operational support to tactical units and base construction of all types on a large scale. These are traditional roles and I believe have been effectively executed with appropriate adaptation to the environment. However, there have simply not been enough engineer resources to provide traditional support and at the same time to provide large scale engineer support to revolutionary development and pacification for which I believe engineer units are particularly well suited. It would seem that in the Vietnam environment more engineer effort should have been programmed and made available at an earlier date to assist the government in maintaining contact with the people in the hamlets and in providing tangible evidence of the desire to improve their standard of living. One of the most important of such tasks is opening secondary and minor roads so that people and products can move freely between hamlets and places of work. During my 15 months in Vietnam, several such projects were initiated by tactical commanders. The major

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effort along these lines was in I CTZ in the XXIV Corps AOR. A second area, sponsored by the CG, 9th Division, was in Long An Province. A third project, recently started, is in Binh Dinh Province in II CTZ. I believe that these projects have provided more return for the engineer effort involved towards winning the war than many of our base development and operational support projects.

- 3. The utilization of helicopters, which permitted the Army in many cases to operate without land LOC's, led to a lack of interest in opening roads and railroads. The people in many hamlets never saw our soldiers or ARVN soldiers on the ground -- they just saw our aircraft flying overhead, whereas they saw the VC or NVA on the ground around them. To some extent, bypassing trouble spots by helicopter is self-defeating in a counterinsurgency environment.
- 4. A major upgrading of primary roads was initiated in late 1967 and was in full swing by late 1969 with a heavy commitment of engineer effort. This program has received high priority and has already provided large dividends for both pure military and pure pacification roles. It has significantly decreased convoy times and necessity for airlift along MSR's, reduced vehicle maintenance requirements, improved security through decreased mining and less exposure time to potential ambush, and greatly enhanced the movement of people and goods. The program has met with some resistance by some commanders who understandably would have preferred to see more engineer effort applied to projects directly affecting their own operations. This major LOC upgrade is of course necessary as a framework around which the minor road program can function -- but both are necessary.
- 5. The greatest single engineer innovation and contribution to the counter-insurgency effort was the organization on a large scale of land clearing operations utilizing dozers equipped with Rome plow blades. Starting in the fall of 1966, this effort had been expanded by January 1969 to six land clearing companies of 30 dozers each. In III CTZ where distances between operations were relatively short, three of the companies were formed into a provisional land clearing battalion, by zeroing out the line companies of a construction battalion, replacing them with land clearing companies and using the battalion headquarters and maintenance capability for command, control and maintenance support. By the summer of 1969 it was apparent that the land clearing operations were having a very significant impact on

ability of the enemy to maintain base areas and to operate in large formations. Further, land clearing operations along LOC's greatly enhanced convoy and civilian traffic security. The dozer-equipped Rome plow has in fact emerged as a major weapons system and one which can make a major contribution in a counterinsurgency environment where tree cover and vegetation provide concealment to the enemy.

- 6. The enemy employment of mines and booby traps has been a continuing problem of major proportions and has revealed the lack of true progress in countermine warfare since World War II. The enemy has adapted as a prime weapon the employment of all sorts of munitions as mines against vehicles and personnel on the road and in the fields. He is dedicated to interdiction of the road net in all areas and to seriously hampering as many combat operations as possible. Configuration of mines varies widely, but components are just as much of US origin as they are Communist bloc, and the mines are cleverly devised.
- a. Our losses reflect the intensity of the enemy efforts. Personnel casualties due to mines and booby traps are a major portion of all hostile-caused casualties. Equipment losses are severe, the most significant problem being the loss of armored personnel carriers and tanks, where two-thirds of all combat losses over the last two years are attributable to mines. In 1968, ACTIV initiated a study to better understand the full extent and significance of the effect of mining on our combat forces. The resulting report, Study and Evaluation of Countermine Activities (SECMA), included in its recommendations the formation of a central staff agency responsible for coordinating all countermine activities among Army commands in the Republic of Vietnam. In January 1969 a Mine Warfare Center was established under the USARV Engineer, and it undertook immediately the task of improving our posture with respect to the mining threat.
- b. Personnel from the Center have made numerous field trips to gather data at working levels and have been active in disseminating information not only to our forces but to CONUS training elements and research and development agencies. A major product of the Mine Warfare Center, providing significant insight into the nature of the mining threat, is its report, Mine Warfare in Vietnam, dated 18 August 1969. The report, which is the result of broad contact with field units and extensive analysis of

mining incidents, provides a comprehensive view of the enemy mine warfare program country-wide, describes attack techniques and materials, and reviews mine and booby trap counter-measures.

- c. While our losses to mines continue to be serious, there is statistical evidence we are facing the threat with more efficiency and greater effectiveness, and are steadily improving our ratio of mines detected to those undetected. Commanders at all levels are more aware of countermeasures available to them and of improved techniques of employment. Road minesweep operations, though demanding in time and effort, have improved through experience. Mine and tunnel detection dog teams have shown promise. An improved model of the metallic and non-metallic portable mine detector will shortly contribute significantly to the capability of sweep teams. Commanders are learning to identify mining problem areas and to deny the enemy access through the use of surveillance and sensing devices, and are discovering direct counteraction techniques to mine laying teams. As developed in this war, however, mine warfare still heavily favors the forces that emplace the mines and places those forces who must detect them or neutralize their effects at a disadvantage. We still have no major technical breakthrough in this area, nor do any appear in prospect.
- 7, During the period of my assignment, the ARVN engineer advisory function was under the J-4, MACV. Early in my tour I initiated through our two engineer brigades an "affiliation" program in which we attempted to provide continuous liaison between all ARVN engineer units and the nearest US engineer units with a view to increasing ARVN engineer effectiveness by providing such assistance as OIT for equipment operators, encouraging joint participation in road and bridge projects, etc. This program has met with partial success only, and generally the further from Saigon the better the cooperation. The ARVN engineer capability is fragmented and spotty. They can and have done excellent work on roads and bridges when so directed by ARVN authorities. However, they have been primarily involved in base camp and dependent housing construction. I believe the organization and direction of the ARVN engineer advisory effort should be reviewed to make the ARVN engineers more responsive to requirements outside base camps and to facilitate coordination with US Army engineer units. One solution would be to place the advisory function back under the USARV Engineer where it can receive more individual assistance, guidance and general officer attention than is available at the MACV staff level. The

ARVN Chief of Engineers is only a colonel and he occupies a minor role in the ARVN hierarchy, completely under ARVN J-4 control. He controls only construction units, has nothing to do with combat engineers, has no direct connection with the ARVN engineer school, and no facilities engineering (R&U) responsibilities. I believe that his role and stature should be increased so that ARVN engineers can contribute more to the pacification and LOC programs and so that the ARVN engineers can be better prepared to take over US engineer operational support type missions as we phaseout. However, I do not believe that ARVN engineers should become heavily involved in the major LOC upgrade because of the technical and heavy equipment requirements involved, but rather should be directed more towards secondary roads, hamlet assistance projects and keeping tactical LOC's open (mine sweeping, interdiction repair, maintenance to the extent the Ministry of Public Works cannot handle).

8. The construction effort in Vietnam has been hampered by requiring construction by engineer troops to be performed under peacetime MCA budget and control procedures. We have never done this before and should never do it again. It is not possible to determine Army construction requirements 18 months in advance, particularly when the force structure is changing dramatically every six months. The budget exercise by line items is a futile one involving initial guessing and continuous reprogramming after approval. The procedures for obtaining approval for projects are time consuming and require too much processing and coordination and too many approval layers. The requirement to maintain accurate costs and reports has kept unit commanders and staffs diverted from the main task of getting the construction job done in a fast, responsive and effective manner. Further, the Army supply system has become overly complicated by trying to maintain separate accounts for MCA and OMA stocks for the same types of items and it has undoubtedly led to excess materials in some areas and shortages in others. Construction projects should be controlled by establishing allowances and standards (MACV has in fact published excellent guides in this respect) and by inspection in the field to see that the standards are not exceeded. They should not be controlled by line item review in Washington. Possibly the MCA route should be used for contractor work, since the contracting process requires more extensive processing, formalized design, mobilization lead times, record keeping, etc. -- but not for construction by troops.

9. In spite of the problem areas referred to above, I believe that in the engineer field, through cooperation of all engineer and construction agencies, a job without precedent in magnitude and responsiveness has been done in providing both engineer operational and construction support to the prosecution of the war effort in Vietnam. It has been the most rewarding assignment of my career and it has been a privilege to be associated with the officers and men of all Services who have been participating in this conflict.

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DAVID S. PARKER

Major General, US Army

#### ADDITIONAL COMMENTS

#### 1. US Army Engineer Organization.

- a. As it finally devolved, there is currently a command organization consisting of Engineer Troops Vietnam (P), with three subordinate commands—two engineer brigades and the United States Army Engineer Construction Agency Vietnam (USAECAV). The two brigades command all non-divisional engineer units except for those detachments assigned a facilities engineering function, which are under USAECAV. The USARV Engineer staff serves as a partial staff for the commander of Engineer Troops.
- b. This arrangement has undoubtedly saved spaces at the theater Army headquarters level. Routine administrative matters such as personnel requisitioning are handled directly between the brigades and USARV without referring to the CG, Engineer Troops. This has eliminated the requirement for the CG, Engineer Troops to have a separate and duplicating general and staff organization, while permitting him to maintain the desired operational control.
- c. USAECAV was created in 1968 to provide stronger management for the MCA program and to provide for the control of facilities engineering and real estate. USAECAV has done a remarkably good job of improving the control and quality of the construction program and obtaining much better performance from the contractor in the facilities engineering field. There is some duplication and overlap between the USAECAV staff sections and the USARV Engineer staff sections, and had this organization not been in effect when I arrived, I would have preferred to set up an organization which combined the USARV Engineer staff section and USAECAV. However, I felt that such a change so soon after the creation of USAECAV would have created too much turbulence; furthermore the organization was working effectively. Undoubtedly as the phaseout of forces in Vietnam progresses, at some point in time USAECAV, the USARV Engineer section and Engineer Troops will have to be consolidated.

#### 2. Provision of Engineer Support.

a. The various forms of engineer support and the methods for obtaining such support are covered in detail in USARV Regulation 415-1 which is a culmination of almost four years experience in Vietnam. In essence the non-divisional engineers are in a general support role for all projects with priority given to operational support requirements stated by the tactical commanders (usually the Field Force commander). It has been necessary

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in Vietnam to have both construction and combat battalions performing all types of engineer support because engineer units are assigned on an area basis; there have not been enough units to separate combat support from construction. This has led to difficulties in establishing priorities for work. Frequently engineer units engaged in base construction have had to stop in the middle of projects to support operational requirements. This has been appropriate but has at times inhibited orderly progress on base construction and formal LOC work. Under the circumstances there simply is no better solution to these priorities. It is inherent in the way the theater is organized and in the shortage of engineer resources compared to requirements.

b. It is believed desirable as a matter of principle to centralize engineer resources to the maximum extent possible and to permit them to be employed in a general support rather than a direct support role. However, the organization pattern as developed here is not necessarily applicable to meet higher intensity conflicts. Under the latter it would be necessary to decentralize control of combat engineer units to corps level.

#### 3. Adequacy of Engineer Force Structure.

- a. As with other combat support and service support units, the peace-time force structure did not provide an adequate base for support in the build-up in Vietnam without mobilization. Engineer units could not be brought in fast enough to provide for an orderly build-up of logistics facilities and a full range of operational support for tactical units. It is my view that there should be more engineers in Vietnam today, even at the expense of maneuver elements, because of the suitability of engineer units for pacification work and their contribution to improving the economic framework of the country.
- b. The civilianization program initiated under Program 6 has been a complete failure. Under this concept, over strong theater objections, in order to save military spaces approximately 225 spaces were deleted from every Army construction battalion (14 battalions) in the theater to be replaced by local civilians. As a practical matter, engineer units at the time the program started were already employing as many civilians as they could find, train, and supervise. Reducing the TOE strength of the battalions

resulted in less ability to supervise and less capability to take on more civilians. The civilianization concept would work satisfactorily, given enough time, at fixed bases where construction battalions do not move, but all our battalions have had to shift locations as work has progressed. The loss of TOE spaces has cut into their ability to execute work, to maintain their equipment and to defend themselves. On the factual side, there are actually fewer civilians under the 14 construction battalions today than there were when the civilianization program was started over a year ago. If such an exercise is attempted in a future conflict, it is believed that the force structure should be reduced when the spaces are withdrawn. We cannot operate on a mobile basis in a counterinsurgency environment at reduced TOE strength.

c. The reduced TOE strength plus manning level cuts forced me to zero out certain units in order to provide spaces to partially fill up the construction battalions. As a result, for over a year the two engineer brigades have been requisitioning on one basis and assigning on another.

#### 4. Length of Tours for Commanders.

For most engineer units at battalion and group level, I believe that six months is an inadequate length of command tour. The unit commander has barely learned his job and the terrain by the time he is ready to leave. Further, he does not have to live with his own mistakes. I therefore initiated a policy that a one year tour for battalion and group commanders would be the rule rather than the exception. The exceptions would be for those commanders who were under particular stress due to combat environment, or to meet key positions on higher level staffs, or the result of sub-marginal performance. This policy has not been in operation long enough for me to judge its value, but it has been consistently indorsed by the five brigade commanders who have served under me.

#### 5. Engineer Equipment Shortages.

a. Engineer units, both divisional and non-divisional, have had serious shortages in TOE equipment, particularly in earth moving, compaction, and water and asphalt distribution. These shortages apparently were the result of several basic problems: loss of requisitions between the unit and CONUS; lack of reconciliation between theater assets and assets as reflected by DA agencies primarily because of loss of items through combat or washout which were not reflected in reports reaching DA agencies; and PEMA budget restrictions which resulted in procurement less than AAO.

- b. Upon arrival in theater, I found that while engineer equipment status of our own units was well known and documented, there was no overall theater list of major engineer equipment items authorized and on-hand for all units, including maintenance float. It took four months for my office working with USARV G-3 and G-4 to develop and agree on a theater wide engineer equipment authorization and asset list. When the deficiencies from this study became known, additional items were requisitioned and shipped to the theater and efforts were made to bring units up to TOE. I had hoped that this would result in a major improvement in our equipment situation, but I find as I leave this assignment that in many areas the rate of washout has been so high that we have made little or no progress and there are still significant shortages. These shortages have also been caused by the necessity to transfer equipment to ARVN engineers.
- c. As in other wars, the tasks engineers are called upon to execute vary so markedly that it is not possible to provide TOE's which can handle all types of requirements effectively. Consequently, we need to have a Class IV equipment pool for each theater which permits temporary augmentation of engineer units when they are committed to tasks for which TOE equipment is inadequate either in type or quantity. This pool would also serve to reduce individual unit MTOE changes and would constitute a single authorization source for TOE changes. Such a pool has recently been authorized for Vietnam but was primarily limited to airmobile equipment because the LOC equipment buy had overtaken many requirements.

#### 6. Maintenance of Engineer Equipment.

- a. The greatest single deficiency in engineer activities in Vietnam has been poor equipment maintenance. Engineer officers at all levels are not adequately trained in equipment maintenance. Shortly after my arrival, I requested that all prospective battalion commanders be sent to the maintenance course at Fort Knox before reporting for duty in Vietnam; however, apparently this has not been possible in most cases. The basic deficiency needs to be corrected in our school systems and in increased command emphasis.
- b. To help overcome some of the maintenance deficiencies, the brigades were directed to initiate CMMI teams, readiness assistance teams were formed in my office and a school for PLL clerks was established

at Long Binh. The net result has been a deadline rate which on the surface is satisfactory and better than average in many areas in peacetime. Unfortunately, however, those items which are deadlined are all too frequently the items which are most critical to a job, to the operation of an entire quarry or to an entire paving operation. Part of this problem is motivation of the unit commander. If he does not take it as a personal insult every time a piece of equipment breaks down, he will not keep his equipment running.

c. Contributing to the engineer maintenance problem is the high density of equipment in Vietnam. We have assigned a light equipment company to every combat battalion, considerably in excess of what was previously considered normal doctrine. This influx of equipment has been most helpful and desirable, but it over-saturated the ability of the logistics command to supply back-up maintenance. The construction battalions have a built-in third echelon capability which greatly improves their ability to keep their equipment running. I believe it is essential that a similar capability be built into either the light equipment company or the combat battalion. Further, I believe that the commanders of the following units, in order of priority, should be increased in grade from captain to major because of the magnitude of the equipment fleet which they must operate and maintain: light equipment companies, construction support companies, and port construction companies.

#### 7. Use of Commercial Equipment.

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- a. Although several years ago there was resistance against the introduction of commercial equipment into the field army, during the past year the concept has received approval at DA levels. Over a year ago the procurement of commercial equipment on a large scale was initiated for use in the LOC program. The equipment procured to date will be evaluated and experience with it provided the appropriate authorities.
- b. To date the equipment has performed well. A major deficiency has been in maintenance support. The maintenance contract for support of this equipment was late in being awarded, overpacks of spare parts originally were inadequate and the flow of spare parts is not satisfactory today. This is the basic responsibility of the USARV Engineer and no one else. Steps are being taken to improve the present situation.

#### 8. Engineer Supply.

Technically under current Army organization, the theater engineer has no responsibility for the supply of engineer materials other than to forecast requirements for non-recurring construction (MCA construction in this theater). In practice my Supply and Maintenance Division had to become heavily involved in the construction materials situation, assisting depots in sorting and identifying items, trying to find out why requisitions were lost, expediting requisitions, reviewing OMA requirements, etc. I believe that serious consideration should be given to returning to a vertical stovepipe system under the engineers for construction materials, equipment and spare parts. I do not believe that supply and maintenance can each be functionalized across the spectrum of all supplies and equipment. There must be vertical expertise through the system so that the people who are dealing with spare parts and supply and maintenance are familiar with the end items they are handling. The alternative is to place increased command emphasis and expertise on engineer materials and maintenance within the logistics command setup. I am afraid, however, that we are losing our remaining Corps of Engineers supply and maintenance technicians. We are fortunate in having a few in the theater who are very good, but I do not see where younger officers are going to come from in the present system to replace them.

#### 9. Engineer Functional Components System.

a. The existing functional components system is inadequate. We need a more versatile system with up-to-date construction materials which will permit rapid requisitioning and will simplify theater design work. We should probably plan on more use of prefabs and relocatable buildings, although there is a tendency to over estimate the time savings through the use of such structures. Preparation times for the foundation, connection of wiring and other utilities are not significantly shorter for such prefabricated buildings as the Army has used in this theater. Most engineer units have developed the capability to pre-cut and pre-fab timber trusses and wall sections which compete reasonably well from the point of view of construction time with such structures as the Adams and Pascoe huts. However, development of the pre-cut and pre-fab capability does take time.

b. The use of the Engineer Functional Components System to requisition materials in the early stages of this conflict brought in many items which were not needed in the theater because the designs were inapplicable to the tropics or to requirements as developed. Further, the supply system lost track of the individual items of supply; bills of materials which were developed in CONUS following the submission of the EFCS coded numbers were either not provided to the theater or were lost. Some of the items apparently arrived several years after the requisitions and the basis for shipment could not be identified.

#### 10. Uniform Construction Standards.

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- a. The standards of accommodations are not consistent in this theater. The accommodations at Air Force and Navy installations are generally higher than those provided at Army installations. This is due partly to the fact that the Navy and Air Force operate from fixed bases and with fewer troop relocations. It is also due partly to the fact that proportionately more resources in the form of troop effort were available for Navy and Air Force base construction than for Amy base construction.
- b. In a counterinsurgency environment there is a general problem as to what standard of accommodation should be provided. It is possible that we have gone too far with our base complexes; however, there is no question but that paved roads, covered maintenance facilities, and adequate utilities improve the Army's ability to maintain its equipment and to administer its operations. At brigade level and lower in the Army, accommodations have remained very austere.
- c. It has been relatively simple to obtain approval for troop housing for Southeast Asia huts or framed buildings at semi-fixed installations, but within the Army at least there has been a great hesitancy to submit requests for recreational and morale facilities such as officer and NCO clubs. I believe the average officer and enlisted man would rather live in a tent and have a decent club for occasional off-duty relief than to live in a framed building and have inadequate club facilities. Further, the cost of morale and welfare facilities is insignificant in the overall program.

#### 11. Support of Air Operations.

- a. In use in Vietnam today there are 77 C-130 fields, 34 C-123 fields and 43 C-7 fields. Maintenance and upkeep of these fields has been a severe problem. The temporary expedients, landing mat in particular, were not intended for use for the extended periods of time for which we have used them. As effort has permitted we have replaced landing mat with asphalt pavement, but the magnitude of the task has been beyond our capability because of the number of fields and their remoteness.
- b. I believe that in Army doctrine there has been a tendency to underestimate the effort required to build and operate C-130 fields, particularly with extended periods of operation and in rainy weather.
- c. A recent complication in support of air operations has been the introduction by the Air Force of the OV-10's, the FAC aircraft. This aircraft should be based at brigade level; however, because of its technical characteristics it requires a high quality runway which is incompatible with the Army concept of forward area operations. The OV-10 will not operate from several of our critical airfields such as Phuoc Vinh and Quan Loi even though these fields are heavily used by C-130's.
- d. The helicopter has also required considerably more engineer support than Army doctrine seems to visualize. It is not simply parked alongside the CO's CP tent, ready to go at a moment's notice. In addition to advanced landing zones, built primarily by division engineers through a number of ingenious techniques, there have been, and continue to be, extensive requirements for revetments, parking areas, maintenance hangars, and paved working areas for POL, ammo, and resupply operations. Undoubtedly many of these requirements stem from the unique aspects of this war, with units operating for long periods of time within one area. The construction has increased effectiveness through added protection and improved maintenance and administration.

#### 12. Use of Civilian Contractor.

a. During the period of my assignment, the civilian contractor under the Navy OICC has generally done excellent work and has been responsive to our requirements for construction in those areas in which he has been

mobilized. In future conflicts, we should certainly plan to use the services of a contractor whenever possible.

b. However, there have been some drawbacks to his utilization. He cannot move from one area to another without excessive mobilization time. Further, he cannot operate in areas of poor security. The design and processing time to get contract work started is normally much longer than for troop units who quite frequently have to design as they build.

#### 13. Division Slice.

One of the basic planning factors in developing manpower requirements for the Army is the use of the division slice. There is considerable danger in using the experience in Vietnam for the basis of division slice computations. We have used a great deal of contractor effort not only in construction but throughout the entire logistics area. This local labor may not always be available. Further, the tempo of operations has been such that we have not had to respond as quickly in the support areas as we would in a higher intensity conflict.

#### 14. Facilities Engineering (R&U).

- a. This is the first time that facilities engineering services have been provided in active theater of operations. The provision of these services has freed tactical troops from many problems associated with maintenance and upkeep of camps and freed engineer troops for operational support and base construction. It has been a worthwhile development.
- b. Under USAECAV, contractor operations have been considerably tightened and the function is being reasonably well performed in most areas.
- c. The requirements for equipment support for facilities engineering were not forecast either by the theater or DA and were not placed on authorization documents until this year. As a result the equipment required by the contractor for execution of his work was not introduced into the Army requirements stream. Equipment had to be diverted from other authorized requirements, to the extent it could be made available.

d. It would be preferable in the future to utilize more military personnel both in execution of facilities engineering and in its supervision, rather than depending heavily on contract personnel. However, we cannot do this without a larger peacetime base from which to expand. In order to provide this base, we should introduce more military personnel into facilities engineering at CONUS installations during peacetime by replacing civilians with military personnel.

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